SAE系列低压通用铝壳电机

SAE Low Voltage General Purpose Aluminum Motors

产品目录 / Catalogue

SALZ

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企业介绍 / Corporate Introduction

企业介绍 / Corporate Introduction

萨尔茨自动化是集工业自动化产品、功能安全产品以及一体化工业自动化控制解决方案的研发、生产及成套调试等于一身的复合型供应商。公司旨在通过持续增强的全球合作伙伴网络及不断拓宽、优化的产品组合为世界各地的客户提供优质的服务。

公司总部设在德国美丽的温泉小镇Bad　Salzuflen，距离全球知名的会展城市汉诺威仅40分钟车程。这里是萨尔茨自动化的创始人兼首席执行官托马斯·胡特梅尔的家乡，同时也是全球最知名的自动化公司的汇集地。公司的联合创始人托马斯·霍尔姆博士同样拥有自动化技术博士学位。他是控制系统和现代通信网络(如 TSN)领域的专家。

自公司成立以来，资深的全球团队通过25年与德国本土及全球知名的自动化公司合作，全面拥抱工业4.0带来的市场机遇及挑战，已成功开发完成自动化控制底层软件、功能性安全产品、基础元器件及电机等一系列软、硬件产品。具备完整的产品和工业工程的研发制造能力。公司同时密切追踪最新技术及市场发展趋势，根据研发路线图计划，全力拓展及优化产品组合，为客户提供更多增值服务。

Dr. Thomas Holm und Thomas Hüttemeier

SALZ Automation is an integrated provider that concentrates on providing the solutions of R&D, production, and the set of equipment's' commissioning for the industrial automation products, functional safety products, and integrated industrial automation. The company aims to supply high-quality services to worldwide customers through the comprehensive global-partners network，meanwhile expanding and optimizing the product- portfolios continuously.

The company is headquartered in the beautiful spa town of Bad Salzuflen in Germany, just 40-minutes range of drive from the world-renowned exhibition city of Hanover. This is the hometown of Thomas Hüttemeier, the founder and CEO of Salz Automation, and also the assembly area of the world's most well-known automation companies. Co-founder Dr. Thomas Holm similarly has a doctorate in automation technology. He is an expert in the field of control systems and modern communication networks such as TSN.

Since its establishment, a senior competent global team has collaborated with well-known automation companies in Germany and around the world for 25 years, fully embracing the market opportunities and challenges brought by Industry 4.0. They have successfully developed a series of software and hardware products, including automation control underlying software, functional safety products, basic components, and motors. Having complete R&D and manufacturing capabilities in product and industrial engineering. The company closely tracks the latest technology and market development trends and strives to expand and optimize its product portfolio according to the R&D roadmap plan, providing customers with more value-added services.

企业介绍 / Corporate Introduction

我们的使命 / Our Mission

我们是挑战者，凭借深厚的知识和坚定的信念，我们帮助人们突破传统自动化的极限。

Combining forces to overcome the limits of industrial automation.

我们的价值观 / Our Value

- 追求具有高投资安全性的灵活解决方案
- 与客户形成伙伴关系
- 坚持高品质产品

- Pursuing flexible solutions with high investment security
- Achieving more through cooperation based on partnership
- We are working according to German quality standards

萨尔茨全球网络 / SALZ Global Network

萨尔茨自动化股份有限公司
总部位于德国巴特萨尔茨乌夫伦

SALZ Automation GmbH
Headquarters in Bad Salzuflen, Germany

萨尔茨自动化有限责任公司
位于美国弗罗里达

SALZ Automation, LLC
Located in Florida, U.S.

萨尔茨自动化（江苏）有限公司
位于中国苏州

SALZ Automation (Jiangsu) Co. ltd.
Located in Changshu, China

萨尔茨电气（上海）有限公司
位于中国上海

SALZ Electric (Shanghai) Co., ltd.
Located in Shanghai, China

产品概述 / General information

SALZ SAE系列通用电机技术特性 / Features of SALZ SAE

- 机座材料：铸铝
- 标准颜色：RAL5024
- 额定功率：0.25 ~ 18.5 kW 50Hz
- 标准安装结构类型(符合 IEC 60034-7 标准规定)
- 所有的电动机设计防护等级IP55 (IEC 60034-5)
- F级绝缘等级，B级温升
- 标配国际品牌高品质轴承
- 电动机标准冷却方式为自扇冷却 IEC 60034-6 规定的 IC 411

- Frame material: Cast Aluminum
- Standard color: RAL 5024
- Rated power output: 0.25 ~ 18.5kW at 50Hz
- Standard mounting construction according to IEC 60034-7
- All motors are designed to IP55 degree of protection (IEC 60034-5)
- Insulation system is designed for Temperature class 155 (F). At rated output with line-fed operation, the motors can be used in temperature class 130 (B)
- Standard international brand high-quality bearings
- Self-ventilated motors with radial-flow fans (cooling method IC411 according to IEC 60034-6) as standard

适用行业 / Target industry

SAE系列电机覆盖造纸、电力、轨交、橡塑、纺织、印刷包装、食品饮料、化工、水和污水处理、暖通等行业的配套机械设备需求。

SAE series motors suitable for P&P, Power, Railway, Rubber and Plastic, textile, Printing and Packaging, Food and Beverage, Chemical, W&WW, HVAC and other industries and supporting machinery and equipment needs.

运行环境 / Target industry

- 防护等级 IP55
- 高度不超过海拔 1000 m
- 环境空气温度：-15ºC ~ +40ºC
- 所允许的相对湿度：
  - -15ºC ≤ T ≤ 20ºC：100%
  - 20ºC < T ≤ 30ºC：95%
  - 30ºC < T ≤ 40ºC：55%

- Degrees of motor protection IP55
- Altitude shall not exceed 1000m
- Allowed air temperature between -15ºC and 40ºC
- Permitted relative humidity:
  - -15ºC ≤ T ≤ 20ºC: 100%
  - 20ºC < T ≤ 30ºC: 95%
  - 30ºC < T ≤ 40ºC: 55%

产品概述 / General information

标准 / Standard

标准名称 Title	IEC 标准 IEC Standard	中国国家标准 Chinese standard
旋转电机 定额和性能 Rotating electrical machines - Part 1: Rating and performance	IEC60034-1	GB755
旋转电机尺寸和输出功率等级 Dimensions and output series for rotating electrical machines	IEC60072-1	GB/T4772.1
三相异步电动机试验方法 Rotating electrical machines - Part 2-1: Standard methods for determining losses and efficiency from tests (excluding machines for traction vehicles)	IEC60034-2-1	GB/T1032
中小型三相异步电动机能效限定值及能效等级 Minimum allowable values of energy efficiency and energy efficiency grades for small and medium three-phase asynchronous motors	IEC60034-30	GB18613
旋转电机线端标志与旋转方向 Rotating electrical machines - Part 8: Terminal markings and direction of rotation	IEC60034-8	GB/T1971
旋转电机的防护等级 (IP) 分级 Rotating electrical machines - Part 5: Degrees of protection provided by the integral design of rotating electrical machines (IP code); Classification	IEC60034-5	GB/T4942.1
旋转电机噪声限值 Rotating electrical machines - Part 9: Noise limits	IEC60034-9	GB/T10069.3
旋转电机冷却方法 Rotating electrical machines; part 6: methods of cooling (IC code)	IEC60034-6	GB/T1993
电机结构及安装型式代号 Rotating electrical machines; part 7: classification of types of constructions and mounting arrangements (IM code)	IEC60034-7	GB/T997
轴中心高为 56mm 及以上电动机的机械振动振动的测量、评定及限值 Rotating electrical machines - Part 14: Mechanical vibration of certain machines with shaft heights 56 mm and higher; Measurement, evaluation, and limits of vibration severity	IEC60034-14	GB10068

产品概述 / General information

安装结构形式 / Mounting arrangements

底脚安装型电机
Foot-mounted motor

IM B3	IM V5	IM V6	IM B6	IM B7	IM B8
IM 1001	IM 1011	IM 1031	IM 1051	IM 1061	IM 1071

凸缘安装型电机，大凸缘
Flange-mounted motor, large flange

IM B5	IM V1	IM V3	(*)	(*)	(*)
IM 3001	IM 3011	IM 3031	IM 3051	IM 3061	IM 3071

凸缘安装型电机，小凸缘
Flange-mounted motor, small flange

IM B14	IM V18	IM V19	(*)	(*)	(*)
IM 3601	IM 3611	IM 3631	IM 3651	IM 3661	IM 3671

底脚和凸缘安装型电机，大凸缘
Foot- and flange-mounted motor with feet, large flange

IM B35	IM V15	IM V35	(*)	(*)	(*)
IM 2001	IM 2011	IM 2031	IM 2051	IM 2061	IM 2071

底脚和凸缘安装型电机，小凸缘
Foot- and flange-mounted motor with feet, small flange

IM B34	IM V17				
IM 2101	IM 2111	IM 2131	IM 2151	IM 2161	IM 2171

(*) IEC 60034-7 无规定。
Not Stated in IEC 60034-7.

订购信息 / Ordering information

型号命名规则 / Model naming convention

SAE003 - 132 S - A 2

型号 / Motor Type：
SALZ High Efficiency Motors
003 - 铸铝 IE3 电机
Cast Aluminum IE3 motor
004 - 铸铝 IE4 电机
Cast Aluminum IE4 motor

机座中心号 / Height：
71
80
90
100
112
132
160

机座长度 / Frame Length：
S：短 / short
M：中 / Middle
L：长 / long

极数 / Number of poles：
2
4
6
8

铁芯长度 / Code of stator length：
A
B

铭牌信息 / Rating plates

铭牌以表格形式提供标准电压的转速、电流和功率因数的数值。

The rating plates are in table form giving values for speed current and power factor for standard voltages.

SALZ			IE4		
3~Motor	SAE004-90S-6			IEC60034-1	
No:			IM B3	Ins. Cl F	IP55
V	Hz	KW	A	r/min	cosØ
380Y	50	0.75	1.97	950	0.7
IE4-82.7%(50Hz)					
6205-2Z/C3	6205-2Z/C3		26 kg	Date: 2024.03	
THREE PHASE INDUCTION MOTOR					

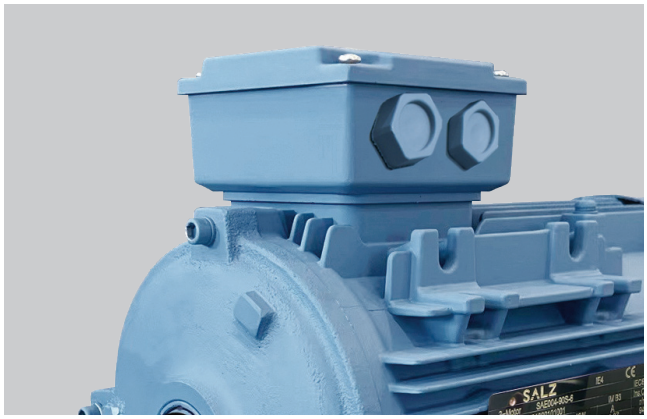
说明： 铭牌图片仅供格式参考，最终数据以实际铭牌为准。
Remark: The format of the rating plate is for reference only. The final figure will be subject to the actual rating plate.

机械设计 / Mechanical design

接线盒 / Terminal box

SALZ SAE系列通用电机标准设计接线盒位于电动机顶端，可4 x 90°旋转安装，使电缆可以从各个方向引入(部分规格旋转90°后可能会与吊环或前方设备相干涉)，所有接线盒配1~2个塑料电缆密封管，接线盒内部安装接地保护装置，标准接线盒的防护等级为IP55。

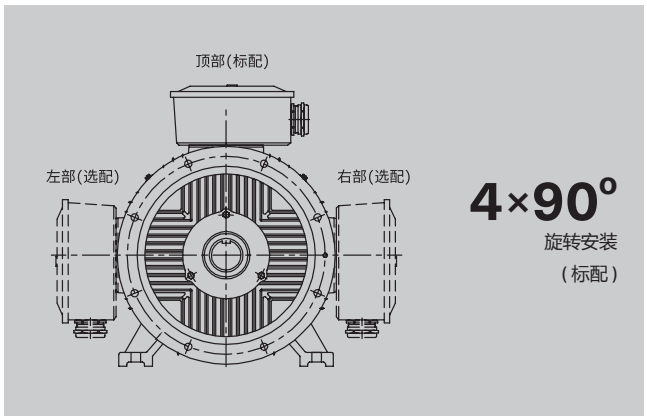
The terminal box is located on the top of motor housing as standard, and can be rotated by 4 x 90° to allow for cable entry from each direction. The terminal box has 1~2 main cable entries. Earthing in main terminal box. The degree of protection for the standard terminal box is IP 55.



接线盒的位置 / Location of the terminal box

接线盒除标准位置外，还可处于电动机的左侧或右侧。电动机接线盒位置可在变量代码中用字符和数字标示出。

Besides standard position, the terminal box also can be on the right or left of motor housing. The position of terminal box can be indicated with digit of motor variant code.



机械设计 / Mechanical design

轴承 / Bearings

SALZ SAE系列通用电机全系标配进口品牌轴承。71~160 机座标配密封式深沟球轴承；轴承配置见下表，轴承润滑及维护详见电动机使用维护说明书。

The SALZ SAE series motors are equipped with imported brand bearings as standard. The 70~160 with sealed deep groove ball bearings; The bearing configuration is shown in the table below, and the lubrication and maintenance of the bearings are detailed in the motor maintenance manual.

机座号 Motor size	极数 Number of poles	轴承 Bearings	
		驱动端、水平安装 D-end	非驱动端 N-end
71	2	6202-ZZ/C3	6202-ZZ/C3
	4,6	6202-ZZ/CM	6202-ZZ/CM
80	2	6204-ZZ/C3	6204-ZZ/C3
	4,6,8	6204-ZZ/CM	6204-ZZ/CM
90	2	6205-ZZ/C3 或 or 6305-ZZ/C3	6205-ZZ/C3
	4,6,8	6205-ZZ/CM 或 or 6305-ZZ/CM	6205-ZZ/CM
100	2	6206-ZZ/C3	6206-ZZ/C3
	4,6,8	6206-ZZ/CM 或 or 6306-ZZ/CM	6206-ZZ/CM
112	2	6206-ZZ/C3	6206-ZZ/C3
	4,6,8	6206-ZZ/CM 或 or 6306-ZZ/CM	6206-ZZ/CM
132	2	6308-ZZ/C3	6208-ZZ/C3
	4,6,8	6308-ZZ/CM	6208-ZZ/CM
160	2,4,6,8	6310-ZZ/C3	6309-ZZ/C3

1. 如需专用轴承，请提供轴承所需要承受的轴向力的大小和方向。

1. If a dedicated bearing is required, please provide the magnitude and direction of the axial force that the bearing needs to withstand.

机械设计 / Mechanical design

轴承寿命 / Bearing life

根据 ISO 281，轴承的正常寿命L_{10h}定义为在特定条件下90%的相同轴承在一系列测试中所达到或超过的运行小时数。50% 的轴承至少达到这一数字的五倍。

The nominal life L_{10h} of a bearing is defined according to ISO 281 as the number of operating hours achieved or exceeded by 90% of identical bearings in a large test series under specified conditions. 50% of bearings achieve at least five times this lifetime.

润滑 / Lubrication

在正常工作条件下，通过测量轴承温度，可以得到最精确的润滑间隔时间。如果测量温度高于+80ºC，则需要缩短在润滑铭牌或电机手册中规定的润滑间隔时间，或使用适用于高温工况的润滑脂。
在非常低的速度和温度(低于20ºC)下连续工作时，标准润滑脂的润滑能力可能不足，而需要使用含添加剂的特定润滑脂。
如果电机配备密封轴承，即一次性润滑轴承，则务必注意，当工作温度与设计温度不同时，轴承的工作寿命也会与设计值不同。
以下数值可作为轴承使用寿命指导值，具体寿命取决于应用和负载情况：2-8 极电机约为 40,000 小时。

In such cases, the most accurate relubrication intervals can be obtained by measuring the bearing temperature under normal operating conditions. If the measured temperature is higher than +80℃, the relubrication intervals specified on the lubrication plate or in the maintenance manual must be shortened, or lubricants suitable for high operating temperatures must be used.
In case of continuous operation at very low speeds and at very low temperatures (below -20ºC), the lubrication properties of standard greases may not be sufficient, and special greases with additives are needed.
Operating temperatures also affect bearing life. When motors are equipped with sealed bearings, that is, bearings greased for life, it must be noted that if the operating temperature differs from the design temperature, the bearing life will also be different.
The following values can be used as a guide for bearing lifetime, depending on application and load conditions: 2-8 pole motors about 40,000h.

皮带轮直径 / Pulley diameter

所需轴承寿命确定后，最小允许皮带轮直径可使用 F_R 计算，如下所示：

$$D = \frac{1.9 \cdot 10^7 \cdot K \cdot P}{n \cdot F_R}$$

其中：
- D : 带轮直径，单位(mm)
- P : 功率要求，kW
- n : 电机转速，r/min
- K : 皮带张力因数，取决于皮带类型和负载类型
- V 形皮带通用值为 2.5
- F_R : 允许径向力

When the desired bearing life has been determined, the minimum permissible pulley diameter can be calculated with F_R as follows:

$$D = \frac{1.9 \cdot 10^7 \cdot K \cdot P}{n \cdot F_R}$$

Where:
- D : Pulley diameter, mm
- P : Power requirement, kW
- n : Motor speed, r/min
- K : Belt tension factor, dependent on belt type and type of duty
- A common value of V-belts is 2.5
- F_R : Permissible radial force

机械设计 / Mechanical design

轴上允许负载 / Permissible loading on the shaft

允许径向力

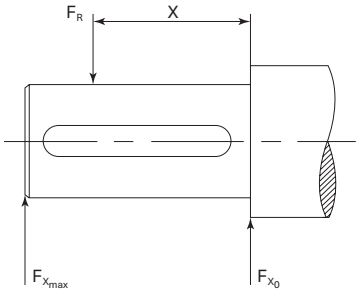
表中提供了环境温度为25°C时，正常条件下，轴向力为零时的轴伸允许径向力(N)。分别对轴承寿命满足20,000小时和40,000小时进行计算。

电机为底座安装型IM B3，并且含横向力。在某些情况下，轴的强度影响允许负载力。需提供同时存在径向力和轴向力的允许负载值，请联系SALZ。

如果径向力作用于点X_0和X_{max}之间，则允许负载力F_R可以通过以下公式计算：

$$F_R = F_{X_0} - \frac{X}{E}(F_{X_0} - F_{X_{max}})$$

E：基本型号中的轴伸长度。



Permissible radial forces

The following table gives the permissible radial forces on shaft in Newton, assuming zero axial force, ambient temperature of 25ºC, and normal conditions at 50Hz. The values are given for calculated bearing life of 20,000 and 40,000 hours per motor size.

These calculated values further assume mounting position IM B3 (foot-mounted), with force directed sideways. In some cases, the strength of the shaft affects permissible forces. Permissible loads of simultaneous radial and axial forces can be supplied on request.

If the radial force is applied between points X_0 and X_{max}, the permissible force F_R can be calculated with the following formula:

$$F_R = F_{X_0} - \frac{X}{E}(F_{X_0} - F_{X_{max}})$$

E : Length of the shaft extension in the standard version.

机座号 Motor Size	极数 Poles	轴伸允许的最大径向力 (N) The permissible axial forces on shaft in Newton (N)			
		20000小时 20000 hours		40000小时 40000 hours	
		F_{X0} (N)	F_{Xmax} (N)	F_{X0} (N)	F_{Xmax} (N)
71	2-8	680	570	680	570
80	2	630	750	930	750
	4-8	930	750	930	750
90	2-8	1010	810	1010	810
100	2-8	2280	1800	2280	1800
112	2-8	2280	1800	2280	1800
132	2-8	2600	2100	2600	2100
160	2	4760	3860	4100	3320
	4	5180	4200	4380	3545
	6	5160	4180	4360	3540
	8	6280	4300	5320	4300

IP55 - IC411 - 绝缘等级F，温升等级B
能效符合 IEC60034-30-1 中 IE3 规定
标准机座 : 2极 380V/50Hz

IP55 - IC411 - Insulation class F, temperature class B
IE3 according to IEC 60034-30-1:2014
Standard Frame: 2 poles 380V/50Hz

功率 Output	型号规格 Motor Type	额定转速 Speed	效率 (100%) Efficiency 100%	功率因数 Power factor	电流 Current		转矩 Torque			重量 Weight
kW		r/min		cosØ	I_N A	I_S/I_N	T_N Nm	T_I/T_N	T_B/T_N	kg
0.37	SAE003-71M-A2	2750	73.8	0.81	0.94	6.1	1.28	2.2	2.2	7.0
0.55	SAE003-71M-B2	2750	77.8	0.82	1.31	6.1	1.91	2.3	2.3	7.5
0.75	SAE003-80M-A2	2880	80.7	0.82	1.72	7.0	2.49	2.3	2.3	9.5
1.1	SAE003-80M-B2	2880	82.7	0.83	2.43	7.3	3.65	2.2	2.3	10.7
1.5	SAE003-90S-2	2895	84.2	0.84	3.22	7.6	4.95	2.2	2.3	17
2.2	SAE003-90L-2	2895	85.9	0.85	4.58	7.6	7.26	2.2	2.3	20
3	SAE003-100L-2	2895	87.1	0.87	6.02	7.8	9.90	2.2	2.3	28
4	SAE003-112M-2	2905	88.1	0.88	7.84	8.3	13.1	2.2	2.3	36
5.5	SAE003-132S-A2	2930	89.2	0.88	10.6	8.3	17.9	2.0	2.3	48
7.5	SAE003-132S-B2	2930	90.1	0.88	14.4	7.9	24.4	2.0	2.3	50
11	SAE003-160M-A2	2945	91.2	0.89	20.6	8.1	35.7	2.0	2.3	108
15	SAE003-160M-B2	2945	91.9	0.89	27.9	8.1	48.6	2.0	2.3	116
18.5	SAE003-160L-2	2940	92.4	0.89	34.2	8.2	60.1	2.0	2.3	135

IP55 - IC411 - 绝缘等级F，温升等级B
能效符合 IEC60034-30-1 中 IE3 规定
标准机座 : 4极 380V/50Hz

IP55 - IC411 - Insulation class F, temperature class B
IE3 according to IEC 60034-30-1:2014
Standard Frame: 4 poles 380V/50Hz

功率 Output	型号规格 Motor Type	额定转速 Speed	效率 (100%) Efficiency 100%	功率因数 Power factor	电流 Current		转矩 Torque			重量 Weight
kW		r/min		cosØ	I_N A	I_S/I_N	T_N Nm	T_I/T_N	T_B/T_N	kg
0.25	SAE003-71M-A4	1340	73.5	0.7	0.7	5.2	1.8	2.1	2.2	7.2
0.37	SAE003-71M-B4	1340	77.3	0.8	1.0	5.2	2.6	2.1	2.2	7.9
0.55	SAE003-80M-A4	1420	80.8	0.8	1.4	5.2	5.2	2.4	2.3	12.1
0.75	SAE003-80M-B4	1420	82.5	0.8	1.8	6.6	5.2	2.3	2.3	12.8
1.1	SAE003-90S-4	1430	84.1	0.8	2.6	6.8	7.3	2.3	2.3	18.5
1.5	SAE003-90L-4	1430	85.3	0.8	3.5	7.0	9.9	2.3	2.3	21.8
2.2	SAE003-100L-A4	1445	86.7	0.8	4.8	7.6	14.6	2.3	2.3	25.4
3	SAE003-100L-B4	1445	87.7	0.8	6.3	7.6	20.0	2.3	2.3	30.5
4	SAE003-112M-4	1445	88.6	0.8	8.4	7.8	26.5	2.2	2.3	37.0
5.5	SAE003-132S-4	1450	89.6	0.8	11.2	7.9	36.0	2.0	2.3	48.5
7.5	SAE003-132M-4	1450	90.4	0.8	15.0	7.5	49.1	2.0	2.3	60
11	SAE003-160M-4	1452	91.4	0.8	21.1	8.2	71.3	2.2	2.3	121
15	SAE003-160L-4	1454	92.1	0.8	28.5	7.2	97.0	2.2	2.3	138

IP55 - IC411 - 绝缘等级F，温升等级B
能效符合 IEC60034-30-1 中 IE3 规定
标准机座 : 6 极 380V/50Hz

IP55 - IC411 - Insulation class F, temperature class B
IE3 according to IEC 60034-30-1:2014
Standard Frame: 6 poles 380V/50Hz

功率 Output	型号规格 Motor Type	额定转速 Speed	效率 (100%) Efficiency 100%	功率因数 Power factor	电流 Current		转矩 Torque			重量 Weight
kW		r/min		cosØ	I_N A	I_S/I_N	T_N Nm	T_I/T_N	T_B/T_N	kg
0.18	SAE003-71M-A6	855	63.9	0.66	0.65	4.0	2.01	1.9	2.0	9.3
0.25	SAE003-71M-B6	855	68.6	0.68	0.81	4.0	2.79	1.9	2.0	9.7
0.37	SAE003-80M-A6	890	73.5	0.70	1.09	4.7	3.97	1.9	2.0	12.2
0.55	SAE003-80M-B6	890	77.2	0.72	1.50	4.7	5.90	1.9	2.1	13.2
0.75	SAE003-90S-6	935	78.9	0.71	2.03	6.0	7.66	2.0	2.1	14.0
1.1	SAE003-90L-6	945	81.0	0.73	2.83	6.0	11.1	2.0	2.1	18.0
1.5	SAE003-100L-6	949	82.5	0.73	3.78	6.5	15.1	2.0	2.1	29.5
2.2	SAE003-112M-6	955	84.3	0.74	5.36	6.6	22.0	2.0	2.1	38.0
3	SAE003-132S-6	968	85.6	0.74	7.20	6.8	29.6	2.0	2.1	52.0
4	SAE003-132M-A6	968	86.8	0.74	9.46	6.8	39.5	2.0	2.1	56.0
5.5	SAE003-132M-B6	968	88.0	0.75	12.7	7.0	54.3	2.0	2.1	59.0
7.5	SAE003-160M-6	970	89.1	0.79	16.2	7.0	73.8	2.0	2.1	118
11	SAE003-160L-6	970	90.3	0.80	23.1	7.2	108.3	2.0	2.1	126

IP55 - IC411 - 绝缘等级F，温升等级B
能效符合 IEC60034-30-1 中 IE3 规定
标准机座 : 8 极 380V/50Hz

IP55 - IC411 - Insulation class F, temperature class B
IE3 according to IEC 60034-30-1:2014
Standard Frame: 8 poles 380V/50Hz

功率 Output	型号规格 Motor Type	额定转速 Speed	效率 (100%) Efficiency 100%	功率因数 Power factor	电流 Current		转矩 Torque			重量 Weight
kW		r/min		cosØ	I_N A	I_S/I_N	T_N Nm	T_I/T_N	T_B/T_N	kg
0.12	SAE003-71M-8	605	50.7	0.57	0.63	2.8	1.89	1.8	1.9	10.6
0.18	SAE003-80M-A8	650	58.7	0.61	0.76	3.3	2.64	1.8	1.9	11.7
0.25	SAE003-80M-B8	650	64.1	0.61	0.97	3.3	3.67	1.8	1.9	12.5
0.37	SAE003-90S-8	675	69.3	0.61	1.33	4.0	5.23	1.8	1.9	17.3
0.55	SAE003-90L-8	675	73.0	0.61	1.88	4.0	7.78	1.8	2.0	21.2
0.75	SAE003-100L-A8	685	75.0	0.67	2.27	4.0	10.5	1.8	2.0	29.0
1.1	SAE003-100L-B8	685	77.7	0.69	3.12	5.0	15.3	1.8	2.0	30.5
1.5	SAE003-112M-8	695	79.7	0.70	4.08	5.0	20.6	1.8	2.0	38.5
2.2	SAE003-132S-8	710	81.9	0.71	5.75	6.0	29.6	1.8	2.0	49.5
3	SAE003-132M-8	710	83.5	0.73	7.48	6.0	40.4	1.8	2.0	59.0
4	SAE003-160M-A8	725	84.8	0.73	9.82	6.0	52.7	1.9	2.0	92.0
5.5	SAE003-160M-B8	725	86.2	0.74	13.1	6.0	72.4	1.9	2.0	96
7.5	SAE003-160L-8	725	87.3	0.75	17.4	6.0	98.8	1.9	2.0	112

IP55 - IC411 - 绝缘等级F，温升等级B
能效符合 IEC60034-30-1 中 IE4 规定
标准机座 : 2极 380V/50Hz

IP55 - IC411 - Insulation class F, temperature class B
IE4 according to IEC 60034-30-1:2014
Standard Frame: 2 poles 380V/50Hz

功率 Output	型号规格 Motor Type	额定转速 Speed	效率 (100%) Efficiency 100%	功率因数 Power factor	电流 Current		转矩 Torque			重量 Weight
kW		r/min		cosØ	I_N A	I_S/I_N	T_N Nm	T_I/T_N	T_B/T_N	kg
0.37	SAE004-71M-A2	2765	78.1	0.81	0.89	6.1	1.28	2.2	2.2	7.3
0.55	SAE004-71M-B2	2765	81.5	0.82	1.25	6.1	1.90	2.3	2.3	8.5
0.75	SAE004-80M-A2	2910	83.5	0.82	1.66	7.0	2.46	2.3	2.3	11.0
1.1	SAE004-80M-B2	2920	85.2	0.83	2.36	7.3	3.60	2.2	2.3	11.6
1.5	SAE004-90S-2	2930	86.5	0.84	3.14	7.6	4.89	2.2	2.3	16.0
2.2	SAE004-90L-2	2930	88.0	0.85	4.47	7.6	7.17	2.2	2.3	20.6
3	SAE004-100L-2	2935	89.1	0.87	5.88	7.8	9.76	2.2	2.3	23.7
4	SAE004-112M-2	2940	90.0	0.88	7.67	8.3	13.0	2.2	2.3	42.0
5.5	SAE004-132S-A2	2945	90.9	0.88	10.4	8.3	17.8	2.0	2.3	46.0
7.5	SAE004-132S-B2	2950	91.7	0.88	14.1	7.9	24.3	2.0	2.3	52.0
11	SAE004-160M-A2	2960	92.6	0.89	20.3	8.1	35.5	2.0	2.3	108
15	SAE004-160M-B2	2960	93.3	0.89	27.4	8.1	48.4	2.0	2.3	116
18.5	SAE004-160L-2	2960	93.7	0.89	33.7	8.2	59.7	2.0	2.3	135

IP55 - IC411 - 绝缘等级F，温升等级B
能效符合 IEC60034-30-1 中 IE4 规定
标准机座 : 4极 380V/50Hz

IP55 - IC411 - Insulation class F, temperature class B
IE4 according to IEC 60034-30-1:2014
Standard Frame: 4 poles 380V/50Hz

功率 Output	型号规格 Motor Type	额定转速 Speed	效率 (100%) Efficiency 100%	功率因数 Power factor	电流 Current		转矩 Torque			重量 Weight
kW		r/min		cosØ	I_N A	I_S/I_N	T_N Nm	T_I/T_N	T_B/T_N	kg
0.25	SAE004-71M-A4	1355	77.9	0.74	0.66	5.2	1.76	2.1	2.2	7.5
0.37	SAE004-71M-B4	1355	81.1	0.75	0.92	5.2	2.61	2.1	2.2	9.2
0.55	SAE004-80M-A4	1420	83.9	0.75	1.33	5.2	3.70	2.4	2.3	11.4
0.75	SAE004-80M-B4	1430	85.7	0.75	1.77	6.6	5.01	2.3	2.3	12.9
1.1	SAE004-90S-4	1445	87.2	0.76	2.52	6.8	7.27	2.3	2.3	16.8
1.5	SAE004-90L-4	1450	88.2	0.77	3.36	7.0	9.88	2.3	2.3	21.7
2.2	SAE004-100L-A4	1455	89.5	0.81	4.61	7.6	14.4	2.3	2.3	25.5
3	SAE004-100L-B4	1455	90.4	0.82	6.15	7.6	19.7	2.3	2.3	31.3
4	SAE004-112M-4	1460	91.1	0.82	8.14	7.8	26.2	2.2	2.3	44.2
5.5	SAE004-132S-4	1470	91.9	0.83	11.0	7.9	35.7	2.0	2.3	51.2
7.5	SAE004-132M-4	1470	92.6	0.84	14.6	7.5	48.7	2.0	2.3	65.0
11	SAE004-160M-4	1475	93.3	0.85	21.1	7.7	71.2	2.2	2.3	116
15	SAE004-160L-4	1475	93.9	0.86	28.2	7.8	97.1	2.2	2.3	126

IP55 - IC411 - 绝缘等级F，温升等级B
能效符合 IEC60034-30-1 中 IE4 规定
标准机座 : 6 极 380V/50Hz

IP55 - IC411 - Insulation class F, temperature class B
IE4 according to IEC 60034-30-1:2014
Standard Frame: 6 poles 380V/50Hz

功率 Output	型号规格 Motor Type	额定转速 Speed	效率 (100%) Efficiency 100%	功率因数 Power factor	电流 Current		转矩 Torque			重量 Weight
kW		r/min		cosØ	I_N A	I_S/I_N	T_N Nm	T_I/T_N	T_B/T_N	kg
0.18	SAE004-71M-A6	860	70.1	0.66	0.59	4.0	2.00	1.9	2.0	9.8
0.25	SAE004-71M-B6	860	74.1	0.68	0.75	4.0	2.78	1.9	2.0	10.3
0.37	SAE004-80M-A6	895	78.0	0.70	1.03	4.7	3.95	1.9	2.0	12.5
0.55	SAE004-80M-B6	895	80.9	0.72	1.43	4.7	5.87	1.9	2.1	13.6
0.75	SAE004-90S-6	950	82.7	0.71	1.94	6.0	7.54	2.0	2.1	17.2
1.1	SAE004-90L-6	955	84.5	0.73	2.71	6.0	11.0	2.0	2.1	22.4
1.5	SAE004-100L-6	960	85.9	0.73	3.63	6.5	14.9	2.0	2.1	33.5
2.2	SAE004-112M-6	965	87.4	0.74	5.17	6.6	21.8	2.0	2.1	38.6
3	SAE004-132S-6	970	88.6	0.74	6.95	6.8	29.5	2.0	2.1	46.0
4	SAE004-132M-A6	975	89.5	0.74	9.18	6.8	39.2	2.0	2.1	54.0
5.5	SAE004-132M-B6	975	90.5	0.75	12.3	7.0	53.9	2.0	2.1	61.8
7.5	SAE004-160M-6	980	91.3	0.79	15.8	7.0	73.1	2.0	2.1	88.3
11	SAE004-160L-6	980	92.3	0.80	22.6	7.2	107.2	2.0	2.1	125

IP55 - IC411 - 绝缘等级F，温升等级B
能效符合 IEC60034-30-1 中 IE4 规定
标准机座 : 8 极 380V/50Hz

IP55 - IC411 - Insulation class F, temperature class B
IE4 according to IEC 60034-30-1:2014
Standard Frame: 8 poles 380V/50Hz

功率 Output	型号规格 Motor Type	额定转速 Speed	效率 (100%) Efficiency 100%	功率因数 Power factor	电流 Current		转矩 Torque			重量 Weight
kW		r/min		cosØ	I_N A	I_S/I_N	T_N Nm	T_I/T_N	T_B/T_N	kg
0.12	SAE004-71M-8	610	62.3	0.57	0.51	2.8	1.88	1.8	1.9	11.0
0.18	SAE004-80M-A8	655	67.2	0.61	0.67	3.3	2.62	1.8	1.9	12.2
0.25	SAE004-80M-B8	655	70.8	0.61	0.88	3.3	3.65	1.8	1.9	12.9
0.37	SAE004-90S-8	680	74.3	0.61	1.24	4.0	5.20	1.8	1.9	17.8
0.55	SAE004-90L-8	680	77.0	0.61	1.78	4.0	7.72	1.8	2.0	22.1
0.75	SAE004-100L-A8	700	78.4	0.67	2.17	4.0	10.2	1.8	2.0	31.0
1.1	SAE004-100L-B8	700	80.8	0.69	3.00	5.0	15.0	1.8	2.0	33.5
1.5	SAE004-112M-8	710	82.6	0.70	3.94	5.0	20.2	1.8	2.0	39.8
2.2	SAE004-132S-8	720	84.5	0.71	5.57	6.0	29.2	1.8	2.0	53.0
3	SAE004-132M-8	720	85.9	0.73	7.27	6.0	39.8	1.8	2.0	61.0
4	SAE004-160M-A8	730	87.1	0.73	9.56	6.0	52.3	1.9	2.0	105
5.5	SAE004-160M-B8	730	88.3	0.74	12.8	6.0	72.0	1.9	2.0	110
7.5	SAE004-160L-8	730	89.3	0.75	17.0	6.0	98.1	1.9	2.0	125

变量代码 / Variant codes

代码 Code	内容 Description	71	80	90	100	112	132	160	备注
安装方式 Mounting arrangements									
MA01	B3 安装形式 Foot mounted	S	S	S	S	S	S	S	
MA02	B5 安装形式 BigFlange mounted	P	P	P	P	P	P	P	
MA03	V1 安装形式 Flange mounted	P	P	P	P	P	P	P	
MA04	B35 安装形式 Foot/flange mounted	P	P	P	P	P	P	P	默认整圆法兰
MA05	B14 安装形式 SmallFlange mounted	P	P	P	P	P	P	P	
MA06	B34 安装形式 IM B34 (2101)	P	P	P	P	P	P	P	
MA07	除上之外其他标准安装形式 Others	R	R	R	R	R	R	R	
接线盒 Terminal box									
TB01	顶出线接线盒 TopTerminalBox	S	S	S	S	S	S	S	
TB02	接线盒出线孔朝 D 端 Cable entry from D-end.	R	R	R	R	R	R	R	
TB03	接线盒出线孔朝 N 端 Cable entry from N-end.	P	P	R	R	R	R	R	
TB04	接线盒出线孔朝左侧 (从 D 端看) Cable entry LHS (seen from D-end)	P	P	P	P	P	P	P	
TB05	特殊要求接线盒 Special Terminal Box	R	R	R	R	R	R	R	
TB06	右侧接线盒 (从 D 端看) Terminal box RHS (seen from D-end)	P	P	P	P	P	P	P	
TB07	左侧接线盒 (从 D 端看) Terminal box LHS (seen from D-end)	P	P	P	P	P	P	P	
轴承及润滑 Bearings and Lubrication									
BL02	密封式轴承 Bearings greased for life	S	S	S	S	S	S	P	
BL03	耐高温润滑脂 Heat-resistant grease	P	P	P	P	P	P	P	
BL04	耐低温润滑脂 Cold-resistant grease	P	P	P	P	P	P	P	

S = 标准配置
R = 需技术确认
NA = 不适用
P = 按定型方案直接排产

S = Included as standard
R = On request
NA = Not applicable
P = Applicable

变量代码 / Variant codes

代码 Code	内容 Description	71	80	90	100	112	132	160	备注
转轴 Shaft & rotor									
SR02	闭口键槽轴伸 Shaft extension with closed keyway	S	S	S	S	S	S	S	
SR04	D 端特殊轴伸 (标准材料) Special shaft extension at D-End, standard shaft material	R	R	R	R	R	R	R	
SR06	不锈钢轴 (标准或非标设计) Shaft material stainless steel	R	R	R	R	R	R	R	
SR07	开口键槽轴伸 Shaft extension with open keyway	P	P	P	P	P	P	P	B 型键
防护 Protection									
IP01	IP55 防护等级 Degree of protection IP55	S	S	S	S	S	S	S	
IP05	外接地 External earthing bolt	P	P	P	P	P	P	P	
IP06	不锈钢螺栓 (304#) Stainless steel	P	P	P	P	P	P	P	
IP07	D 端径向密封 Radial seal at D-end.	P	P	P	P	P	P	P	
铭牌 Rating & instruction plates									
NP01	重敲铭牌异电压、异频率、异功率、异工作制 Restamping voltage, frequency and output, continuous duty	P	P	P	P	P	P	P	
质保 Warranty									
W01	延长质保 Extension on standard warranty	R	R	R	R	R	R	R	
其他 Others									
U00	其他要求 Others	R	R	R	R	R	R	R	

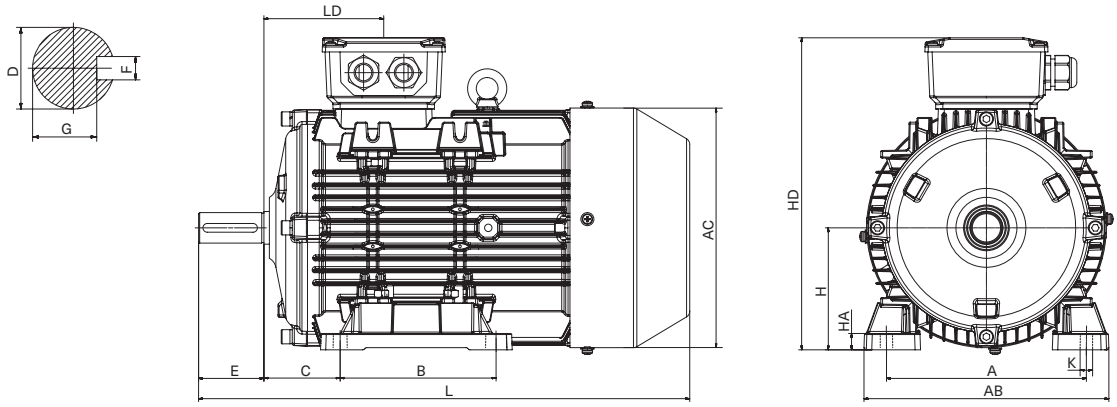
S = 标准配置
R = 需技术确认
NA = 不适用
P = 按定型方案直接排产

S = Included as standard
R = On request
NA = Not applicable
P = Applicable

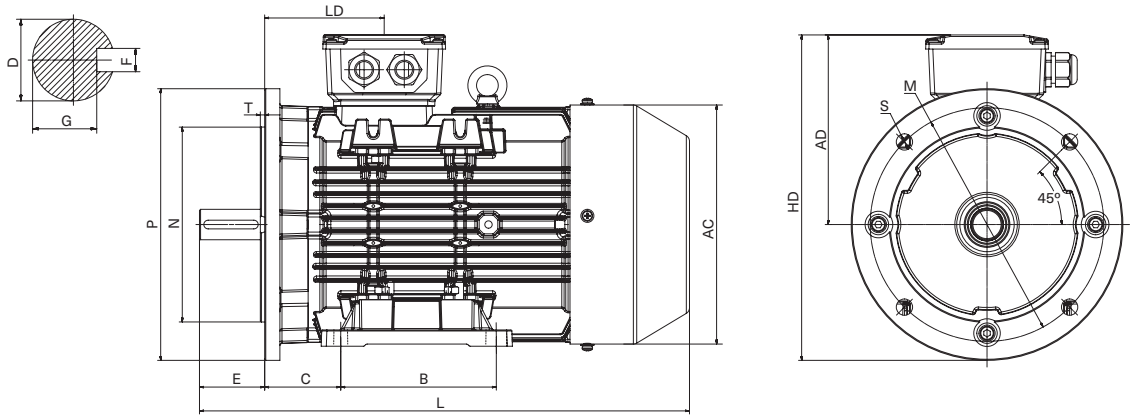
外形图及外形尺寸 / Dimension drawings

机座号 71~160 / FrameSize 71~160

底脚安装电机 IMB3
Foot-mounted motor IMB3



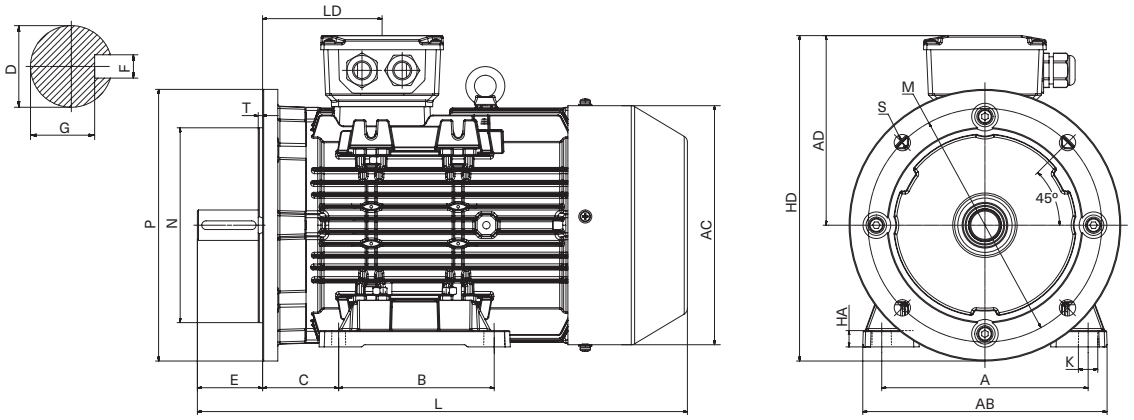
大凸缘安装电机 IMB5
Big Flange-mounted motor IMB5



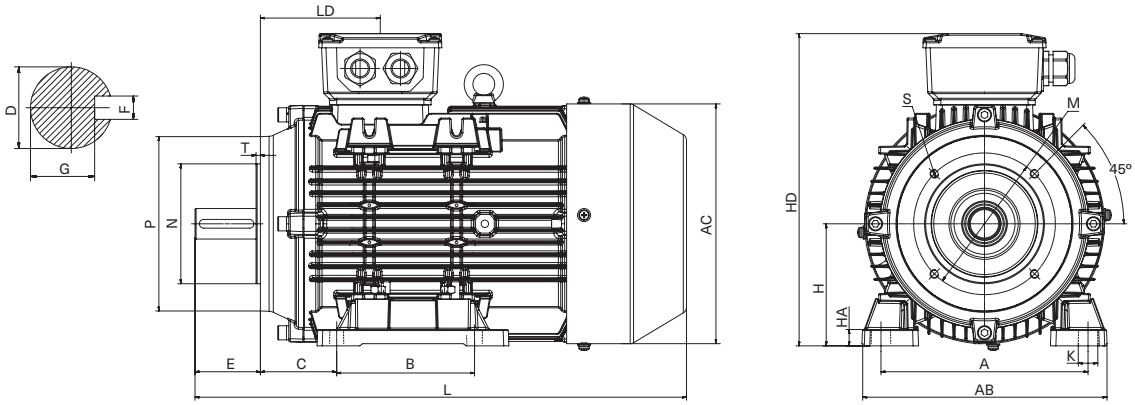
外形图及外形尺寸 / Dimension drawings

机座号 71~160 / FrameSize 71~160

底脚和大凸缘安装电机 IMB35
Foot- and big flange-mounted motor IMB35



底脚和小凸缘安装电机 IMB34
Foot- and small flange-mounted motor IMB34



外形图及外形尺寸 / Dimension drawings

机座号SAE003 71~160 / Frame Size SAE003 71~160

IMB3；IMB35

机座 Frame Size	A	AA	AB	AC	B	BB	C	D	E	F	G	GA	H	K	HA	HD	L
71	112	32	144	136	90	120	45	14	30	5	11	16	71	7	8	187	242
80	125	34	160	167	100	150	50	19	40	6	15.5	21.5	80	10	10	205	304
90S	140	36	176	182.4	100	161	56	24	50	8	20	27	90	10	12	220	336
90L	140	36	176	182.4	125	186	56	24	50	8	20	27	90	10	12	220	361
100	160	40	200	205.4	140	213	63	28	60	8	24	31	100	12	14	244	406
112	190	50	240	230	140	188	70	28	60	8	24	31	112	12	15	287	394
132S	216	55	262	258.4	140	200	89	38	80	10	33	41	132	12	18	327	438
132M	216	55	262	258.4	178	238	89	38	80	10	33	41	132	12	18	327	476
160M	254	65	314	314	210	260	108	42	110	12	37	45	160	14.5	20	418	608
160L	254	65	314	314	254	304	108	42	110	12	37	45	160	14.5	20	418	652

IMB5、IMV1、IMV3；IMB35

机座 Frame Size	HB	LA	M	N	P	S	T
71	119	10	130	110	160	10	3.5
80	154.5	12	165	130	200	12	3.5
90	162	12	165	130	200	12	3.5
100	173.5	13	215	180	250	14.5	4
112	188	14	215	180	250	14.5	4
132	203	14	265	230	300	14.5	4
160	251	15	300	250	350	18.5	5

注：电机立式向下安装时，该电机总长度 L 不包括增加的防雨帽长度。

IMB14；IMB34

机座 Frame Size	HB	M	N	P	S	T
71	119	85	70	105	6	3
80	154.5	100	80	120	6	3
90	162	115	95	140	8	3
100	173.5	130	110	160	8	3.5
112	188	130	110	160	8	3.5
132	203	165	130	200	10	3.5

Note: When the motor is installed vertically downwards, the total length L of the motor does not include the added length of the protective roof.

机座号SAE004 71~160 / Frame Size SAE004 71~160

IMB3；IMB35

机座 Frame Size	A	AA	AB	AC	B	BB	C	D	E	F	G	GA	H	K	HA	HD	L
71	112	32	144	155	90	120	45	14	30	5	11	16	71	7	8	187	266
80	125	34	160	167	100	150	50	19	40	6	15.5	21.5	80	10	10	205	311
90S	140	36	176	183.4	100	180	56	24	50	8	20	27	90	10	12	220	356
90L	140	36	176	183.4	125	210	56	24	50	8	20	27	90	10	12	220	386
100	160	40	200	205.4	140	213	63	28	60	8	24	31	100	12	14	244	411
112	190	50	240	230	140	188	70	28	60	8	24	31	112	12	15	287	394
132S	216	55	262	292.4	140	226	89	38	80	10	33	41	132	12	18	327	503
132M	216	55	262	292.4	178	256	89	38	80	10	33	41	132	12	18	327	533
160M	254	63	310	335	210	315	108	42	110	12	37	45	160	14.5	20	418	648
160L	254	63	310	335	254	355	108	42	110	12	37	45	160	14.5	20	418	688

IMB5、IMV1、IMV3；IMB35

机座 Frame Size	HB	LA	M	N	P	S	T
71	119	10	130	110	160	10	3.5
80	147	12	165	130	200	12	3.5
90	155.5	12	165	130	200	12	3.5
100	167	13	215	180	250	14.5	4
112	188	14	215	180	250	14.5	4
132	217	14	265	230	300	14.5	4
160	256	15	300	250	350	18.5	5

注：电机立式向下安装时，该电机总长度 L 不包括增加的防雨帽长度。

IMB14；IMB34

机座 Frame Size	HB	M	N	P	S	T
71	119	85	70	105	6	3
80	147	100	80	120	M6	3
90	155.5	115	95	140	M8	3
100	167	130	110	160	M8	4
112	188	130	110	160	M8	4
132	217	165	130	200	M10	4

Note: When the motor is installed vertically downwards, the total length L of the motor does not include the added length of the protective roof.

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